## CLAIMS

What is claimed is:

1. A method comprising:

granting radio network access to a first wireless device operating under a given mobile identification number (MIN) and a given electronic serial number (ESN), and then engaging in a first over-the-air activation process to establish a first subscriber account for the first wireless device and to program the first wireless device with a first new MIN; and

granting radio network access to a second wireless device operating under the same given MIN and the same given ESN, and then engaging in a second over-the-air phone activation process to establish a second subscriber account for the second wireless device and to program the second wireless device with a second new MIN different than the first new MIN.

2. The method of claim 1, further comprising:

granting radio network access to the first wireless device operating under the first new MIN; and

granting radio network access to the second wireless device operating under the second new MIN.

3. The method of claim 1, further comprising setting a network authentication entity to allow multiple wireless devices to operate concurrently under the given MIN and the given ESN.



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4. The method of claim 1, further comprising:

maintaining in a switch a set of logic that blocks a given wireless device from originating voice calls if the wireless device is operating under the given MIN and the given ESN but that allows the given wireless device to originate a packet data session if the given wireless device is operating under the given MIN and the given ESN.

5. The method of claim 1, further comprising:

after granting radio network access to the first wireless device, allowing the first wireless device to enter into a first packet-data session with a provisioning server, wherein engaging in the first over-the-air activation process comprises the provisioning server engaging in the first over-the-air activation process with the first wireless device; and

after granting radio network access to the second wireless device, allowing the second wireless device to enter into a second packet-data session with the provisioning server, wherein engaging in the second over-the-air activation process comprises the provisioning server engaging in the second over-the-air activation process with the second wireless device.

6. The method of claim 1,

wherein engaging in the first over-the-air activation process comprises (i) exchanging web communications between the provisioning server and the first wireless device to collect user data for the first subscriber account, and (ii) sending the first MIN from the provisioning server to the first wireless device for the first wireless device to record in data storage for later use; and

wherein engaging in the second over-the-air activation process comprises (i) exchanging web communications between the provisioning server and the second wireless device to collect



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user data for the second subscriber account, and (ii) sending the second MIN from the provisioning server to the second wireless device for the first wireless device to record in data storage for later use.

7. The method of claim 1,

wherein the first wireless device is selected from the group consisting of a cell phone, a personal digital assistant and a wirelessly-equipped personal computer; and

wherein the second wireless device is selected from the group consisting of a cell phone, a personal digital assistant and a wirelessly-equipped personal computer.

8. A method comprising:

distributing a plurality of wireless devices to users, wherein each wireless device of the plurality of wireless devices includes stored pre-activation provisioning data and stored post-activation provisioning data, wherein the stored pre-activation provisioning data on all of the wireless devices includes (i) common authentication data that is the same on all of the wireless devices and (ii) unique authentication data that is different per wireless device;

receiving into a network from a first of the wireless devices a first registration request that carries the common authentication data, and granting radio frequency (RF) connectivity to the first wireless device in response to at least the common authentication data carried in the first registration request; and

receiving into the network from a second of the wireless devices a second registration request that carries the common authentication data, and granting RF connectivity to the second



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wireless device in response to at least the common authentication data carried in the second registration request.

9. The method of claim 8, further comprising:

receiving into the network from the first wireless device a first mobile-IP registration request carrying the unique pre-activation provisioning data of the first wireless device, and granting packet-data connectivity to the first wireless device in response to at least the unique pre-activation provisioning data of the first wireless device;

receiving into the network from the second wireless device a second mobile-IP registration request carrying the unique pre-activation provisioning data of the second wireless device, and granting packet-data connectivity to the second wireless device in response to at least the unique pre-activation provisioning data of the second wireless device;

receiving into the network from the first wireless device a first packet-data communication, and sending the first packet-data communication to a provisioning server to trigger a provisioning session between the provisioning server and the first wireless device, in which the provisioning server collects billing information from the first wireless device and sends further post-activation provisioning data to the first wireless device; and

receiving into the network from the second wireless device a second packet-data communication, and sending the second packet-data communication to a provisioning server to trigger a provisioning session between the provisioning server and the second wireless device, in which the provisioning server collects billing information from the second wireless device and sends further post-activation provisioning data to the second wireless device.



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10. The method of claim 8,

wherein the common pre-activation provisioning data includes (i) a common mobile identification number and (ii) a common electronic serial number;

wherein the unique pre-activation provisioning data includes a unique username; and

wherein the stored post-activation provisioning data on each device includes an electronic serial number that is different per wireless device.

11. The method of claim 10, wherein the pre-activation provisioning data further includes a common authentication-key (A-key).

12. The method of claim 8, wherein each of the first and second wireless devices is selected from the group consisting of a cell phone, a personal digital assistant and a wirelessly-equipped personal computer.

13. The method of claim 8, wherein distributing the plurality of wireless devices comprises selling the plurality of wireless devices.

14. A wireless device comprising:

a processor;

data storage;

a wireless communication interface; and

a user interface,



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wherein the data storage contains pre-activation provisioning data and initial post-activation provisioning data, wherein the pre-activation provisioning data comprises a mobile identification number / electronic serial number (MIN/ESN) pair that is the same as a MIN/ESN pair stored as pre-activation provisioning data on at least one other wireless device, and wherein the initial post-activation provisioning data comprises an ESN that is unique to the wireless device.

15. The wireless device of claim 14, wherein the data storage further comprises application logic executable by the processor (i) to use the pre-activation MIN/ESN pair as a basis to request radio frequency (RF) connectivity from a wireless carrier, (ii) to engage in a data session with a provisioning server, (iii) to send billing information to the provisioning server, and (iv) to receive and store further post-activation provisioning data from the provisioning server,

wherein the further post-activation provisioning data comprises a MIN unique to the wireless device,

whereby the post-activation ESN and post-activation MIN are usable in combination by the wireless device to thereafter gain RF connectivity.

16. The wireless device of claim 14, wherein the device is selected from the group consisting of a cell phone, a personal digital assistant and a wirelessly-equipped personal computer.

17. The wireless device of claim 14, wherein the initial post-activation provisioning data is stored in a Number Assignment Module (NAM) block of the data storage, and wherein



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the application logic is executable to determine that the NAM block does not contain a MIN and to responsively use the pre-activation MIN/ESN pair as a basis to request RF connectivity.

18. A method comprising:

storing concurrently in a wireless device both pre-activation provisioning data and post-activation provisioning data, wherein the pre-activation provisioning data comprises a mobile identification number / electronic serial number (MIN/ESN) pair that is the same as a MIN/ESN pair stored as pre-activation provisioning data on at least one other wireless device, and wherein the post-activation provisioning data comprises an ESN that is unique to the wireless device;

sending from the wireless device into a network a registration request carrying the common MIN/ESN pair, so as to acquire radio frequency (RF) connectivity.

19. The method of claim 18, further comprising, after acquiring RF connectivity:

sending from the wireless device into the network a data communication, and then receiving into the wireless device a request for billing information to set up a service account for the wireless device;

sending the requested billing information from the wireless device into the network; and

receiving from the network a post-activation MIN tied to the service account, and storing the post-activation MIN in the wireless device.

20. The method of claim 19, further comprising, after storing the post-activation MIN:

using the post-activation MIN and post-activation ESN as a basis to gain RF connectivity.



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21. A cellular telephone activation system comprising:

a radio network access system arranged to grant radio network access concurrently to multiple cellular telephones operating under a common mobile identification number (MIN) / electronic serial number (ESN) pair; and

an over the air activation system arranged to engage in web communication with a cellular telephone operating under the common MIN/ESN pair and to program the cellular telephone with a new MIN.



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